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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,127	12/14/2005	Ikushi Yoda	274125US2PCT	1081
22850 7590 10/30/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER ANYIKIRE, CHIKAO DILLI E				
ART UNIT 2621		PAPER NUMBER		
NOTIFICATION DATE 10/30/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/540,127

**Applicant(s)**

YODA ET AL.

**Examiner**

CHIKAODILI E. ANYIKIRE

**Art Unit**

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 17 is/are rejected.
- 7) ☐ Claim(s) 5-16, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This application is responsive to application number (10540127) filed on December 17, 2003. Claims 1-19 are pending and have been examined.

***Information Disclosure Statement***

2. Acknowledgement is made of applicant's information disclosure statement.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al (JP 2002-259989, hereafter Watanabe).

As per **claim 1**, Watanabe discloses an interface apparatus comprising:

(a) image processing means for picking up images of the interior of an indoor space with a plurality of stereo cameras (Fig 1 element 11; paragraph [0016]), and producing a distance image based on the picked up images within the visual field and an indoor coordinate system on a camera-by-camera basis (paragraph [0023] lines 1 - 8);

(b) positional-posture and arm-pointing recognition means for extracting the positional posture and arm pointing of a user from the distance information from the stereo cameras (paragraph [0023] lines 1-8; Watanabe discloses doing an extraction of the face and hand based on the estimation results for the face); and

(c) pointing-action recognition means for determining, when arm pointing by the user has been identified, whether or not the arm pointing is a pointing action, from the pointing direction and the motion of the arm (paragraph [0023] lines 8 – 10; Watanabe discloses the hand direction being computed based on three-dimensional information with regards to the hand and face area in space with regards to the pointing direction).

As per **claim 2**, Watanabe discloses the interface apparatus according to claim 1, further comprising an operation-command transmitter-receiver that transmits a command for operating a registered indoor device according to the operation of the pointing-action recognition means and receives the result (paragraph [0031]; Watanabe discloses a memory storage device where registration as the examiner understand it is being taken place).

As per **claim 3**, Watanabe discloses the interface apparatus according to claim 1, wherein the positional-posture and arm-pointing recognition means includes a positional-posture recognition section that performs a posture recognition process for multiple users by extracting the distance data from the collected three-dimensional information along the indoor-space coordinate system by a different-level extracting method and projecting the data onto a two-dimensional plane (paragraph [0023];

Watanabe discloses extracting and computing the distance information based on the three dimensional positions of the face and head and discloses happens through a discriminate analysis method), and

an arm-pointing recognition section that determines the direction of the arm pointing from the obtained two-dimensional projection drawing of the multiple users (paragraph [0023] and [0031] lines 3-4; Watanabe discloses having multiple subjects in the indoor space).

As per **claim 4**, Watanabe discloses the interface apparatus according to claim 1, wherein the pointing-action recognition means includes an pointing-action recognition section that recognizes the pointing action from time-series data on the obtained arm-pointing direction(paragraph [0054]; Watanabe discloses finding the direction of the hand based on it's relation to the subject's face), an operating-unit database that stores information on the operation object unit that is an object of arm pointing and an operation method for the same, and an operating-unit registration section that stores basic information, position, and an operating method of the operation object unit (paragraphs [0018] and [0031]; Watanabe discloses using time code composers to synchronize the image data with the personal computers in the video cameras and that being part of memory storage).

As per **claim 17**, Watanabe discloses the interface apparatus according to claim 1, wherein a specified area in the indoor space is registered in advance, wherein when a user is present in the specified area, the arm pointing of the user is identified

(paragraph [0023] and [0031]; Watanabe discloses the system works in an indoor space and that the system is registered to a memory storage device where a hand is recognized and computed).

### ***Allowable Subject Matter***

5. Claims 5-16 and 18-19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHIKAODILI E. ANYIKIRE whose telephone number is (571)270-1445. The examiner can normally be reached on Monday to Friday, 7:30 am to 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272 - 7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/  
Supervisory Patent Examiner, Art Unit 2621

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